

**Amendments to the Specification:**

Please amend the paragraph at page 2, lines 11-19 as follows:

In particular, in the UWB having a high frequency, it is difficult to prevent carrier leakage, and pulse-off time is approximately ~~four~~ several thousand times pulse-on time in a short-range radar using a UWB. For this reason, a power of the carrier leakage becomes very high. As a result, a spectrum density  $S_x$  of the short pulse  $P_b$  has a characteristic that, for example, as shown in FIG. 25, a leakage component  $S'$  considerably outstands at a position corresponding to a carrier frequency  $f_c$ .